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ABSTRACT

Intended as an aid to researchers who must decide which measurement techniques to use in the study of organizational communication, this paper describes and analyzes three of the most widely used data collection instruments: the Communication Audit Survey Questionnaire (CAS), the Communication Satisfaction Questionnaire (CSQ), and the Organizational Communication Questionnaire. The first part of the paper provides a general introduction, while the second part examines the construct of organization-wide communication and offers a comparative analysis of the dimensions covered by the three instruments. The third part of the paper comments on the research applications of each instrument, and the final part offers a detailed description of each, including background, development history, reliability and validity assessment information, and illustrative questions for each instrument dimension. References for the published and unpublished literature explaining, criticizing, or using each instrument are appended. (FL)

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THE MEASUREMENT OF ORGANIZATION-WIDE COMMUNICATION: A COMPARISON OF THREE RECOGNIZED INSTRUMENTS

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I - INTRODUCTION

This paper identifies, describes and analyzes three data collection instruments measuring the research variable of organization-wide communication:

1 - The Communication Audit Survey Questionnaire (CAS) authored by members of the International Communication Association, 1977.

2 - The Communication Satisfaction Questionnaire (CSQ) authored by Cal W. Downs and Michael D. Hazen, 1977.

3 - The Organizational Communication Questionnaire (OCQ) authored by Karlene H. Roberts and Charles A. O'Reilly III, 1974.

In an extensive study of doctoral dissertations and published journal articles related to the field of organizational communication, each of these instruments was found to rank among the most popular communication-related instruments employed in the 8 year period, 1976-83 (Greenbaum et al.; Falcione et al., 1977-1985). The research studies indicated 1621 applications of 107 measurement instruments that had been employed a minimum of 3 times during the 8 year period. A classification by concept measured of the 107 instruments disclosed these three instruments with 28 research applications in the category of organization-wide communication. During this 8 year period, the most popular instrument in this category was the CAS with 14 research applications, followed by the CSQ with 8 applications, and the OCQ with 6 applications· and the trend of research usage was for increasing applications of the CAS and the CSQ in the later years. Each of the instruments is based on a published article or book presenting both history of development and reliability/validity assessment data; and each has been subject to critical reviews including replications testing the validity and reliability representations. To a great extent, therefore, these 3 measurement tools are well-recognized data collection instruments.

Our particular purpose is to provide a description of each instrument and a comparative analysis of the three instruments so as to be helpful to present and future researchers beset with the problem of deciding which instrument to employ, if any, when the study in-hand includes the need to measure organization-wide communication. A broader objective is to furnish a methodology for evaluating instruments prior to selection. Therefore, we are also concerned with developing a structured approach for the evaluation and selection of appropriate measurement instruments.

The plan of the paper is first to explain the construct of organization-wide communication and provide a comparative analysis of the instrument coverages. Then comment as to the nature of research applications for each of the instruments. This is followed by a detailed description of each of the instruments providing background, history of development, reliability and validity assessment information, and illustrative questions for each of the instrument dimensions. References to the published and unpublished literature explaining, criticizing, or utilizing the particular instrument are attached herewith in a separate appendix.

II - THE NATURE OF THE VARIABLE "ORGANIZATIONAL COMMUNICATION"

The question of what is being measured can be answered by giving close attention to the stated intentions of the authors of the respective instruments, and by comparing the dimensions (scales) covered by each of the instruments. This should give rise to the meaning intended by the term "organizational communication" in the instrument titled "Organizational Communication Questionnaire": and to the meaning intended by the word "Communication" in the other two instruments.

INTENTIONS OF INSTRUMENT AUTHORS:

Goldhaber & Rogers (1979) note that the Communication Audit Survey was intended to measure both attitudes and perceptions about communication sources, messages, channels and receivers within the context of the major interfaces of individual to individual, individual to unit, individual to organization, unit to unit, and organization to environment. Major topics surveyed include concepts about information accessibility, information adequacy, communication satisfaction, communication content (clarity, accuracy, utility, appropriateness, timeliness), communication relationships, and communication outcomes.

Downs & Hazen (1977) indicate that the Communication Satisfaction Questionnaire was developed for the purpose of exploring the relationships between communication and the outcome variable of job satisfaction, to test the hypothesis that communication satisfaction is multidimensional, and to determine how individual communication dimensions relate to global job satisfaction. Crino & White (1981) note that the Downs & Hazen definition of communication satisfaction is "an individual's satisfaction with various aspects of communication in his organization." The eight dimensions developed to represent the multi-dimensional concept of communication included organizational perspective, personal feedback, organizational integration, relation with supervisor, communication climate, horizontal communication, media quality, and relation with subordinates.

Roberts & O'Reilly (1974) developed the Organizational Communication Questionnaire in response to the realization that there had been no systematic development of instrumentation to measure communication variables in organizations; and they noted that their research was intended to be a beginning for the creation of a standardized questionnaire that could be used to compare communication across organizations. Their questionnaire secures a report both on the nature of communication as a process, and the condition of certain variables

which have been shown to influence communication -- i.e., trust in superior, perceived influence of the superior, and respondent mobility aspirations. The dimensions selected to represent communication in the organization included desire for interaction, directionality-upward, directionality-downward, directionality-lateral, accuracy, summarization, gatekeeping, overload, satisfaction, written medium, face to face medium, telephone medium and other media.

COMPARATIVE COVERAGES (SCOPE) OF THE INSTRUMENT:

Table 1, THE COMMUNICATION AUDIT SURVEY (CAS) COMPARED TO THE CSQ AND THE OCQ presents the 8 major dimensions of the CAS, noting the number of items devoted to each CAS scale, and the number of items in the CSQ and the OCQ that appear to fulfill a similar function. Five of the CAS scales (receiving information, sending information, follow-up on information, sources of information, and use of channels) employ a response format within each scale in which one-half the items are expressive of "current" condition, and the other half of the items relative to the same item (question) are expressive of "ideal" condition. This type of response format is not present in the other instruments. 84 of the items in the CAS are contained in these five scales. If adjustment were effected so as to consider the "current" and the "ideal" as one item instead of two items, then the total length of CAS would be decreased by 42 items to a net of 80 items, which is still approximately double the length of the CSQ and the OCQ.

[Table 1 - about here]

In general, the CAS scales provide many more items for each dimension than is found in the CSQ and the OCQ. One near exception is dimension #2, "Sending Information" where the CAS has 14 items noted in the instrument, 7 of which relate to current condition and 7 relate to the ideal condition of a

communication sending event and the CSQ has 2 items, but the OCQ has 12 items concerned with directionality upward, downward, and lateral, and summarization, gatekeeping, and desire for interaction.

Three of the CAS dimensions differ markedly from the other two instruments: Scale #3 in CAS, "Follow-up on Information" has no counterpart in the CSQ or the OCQ; Scale #5, "Timeliness of Information" represented by 6 items in the CAS, is contained in one item of the CSQ, and is not represented in the OCQ; and Scale #7, "Satisfaction with Organizational Outcomes" represented by 13 items in the CAS relative to pay, job, advancement, organization efficiency, goals and product, is found in much less detail in both the CSQ and the OCQ, involving 3 items in the CSQ related to global job satisfaction, and 1 item in the OCQ concerned with communication satisfaction.

Finally, the CAS provides for open-ended responses to be provided by the respondent after each set of close-ended items relative to a given dimension (scale). The open-ended responses allow the respondent to record work-related experiences involving effective or ineffective communication relative to the items in a given scale. The recording form is called "Communicative Experience Form" and the respondent is requested to note (1) who was involved in the incident, (2) whether the experience involved effective or ineffective communication, (3) what item in the questionnaire relates most closely to the incident, and (4) a description of the event. In contrast, the OCQ does not provide for any open-ended responses, while the CSQ does provide for open-ended responses relative to the items of (1) job satisfaction, and (2) productivity, asking how communication associated with the job could be changed to improve the level of job satisfaction, and the level of productivity.

Table 2, THE COMMUNICATION SATISFACTION QUESTIONNAIRE (CSQ) COMPARED TO THE CAS AND THE OCQ presents the 10 major dimensions of the CSQ, noting the number of

items devoted to the particular scale, and the number of items in the CAS and the OCQ that appear to fulfill a similar function.

[Table 2 - about here]

Five of the CSQ scales differ from the other instruments: Scale #1, "General Job Satisfaction" consists of 3 items: (1) How satisfied are you with your job?; (2) In the past 6 months, what has happened to your level of satisfaction?; and (3) Indicate how the communication associated with your job could be changed in any way to make you more satisfied [open-ended question], whereas the OCQ provides 1 item relative to communication satisfaction, and the CAS has 13 items which explore many phases of the satisfaction phenomenon, including job, pay, supervision, peers, advancement, rewards, efficiency, and achievement, as well as organization communicative efforts: Scale #2, "Productivity" does not appear in either the CAS or the OCQ: Scale #3, "General Organization Perspective", does appear fully in the CAS, but is not found in the OCQ: Scale #5, "Organizational Integration", appears most completely in the CAS, but is treated briefly by one item in the OCQ; and Scale #7, "Communication Climate" is represented by six items in the CAS and by one item in the OCQ.

Table 3, The Organizational Communication Questionnaire (OCQ) Compared to the CAS and the CSQ presents 16 major dimensions of the OCQ, noting the number of items devoted to the particular scale in the OCQ, and the number of items in the CAS and the CSQ that appear to fulfill a similar function. Five of the OCQ scales differ from the other instruments: Scale #2, "Influence of Superior" does not appear in either the CAS or the CSQ; and the same is true of Scales 8, 9, and 10, relative to "Accuracy of Information", "Summarization Frequency", and "Gatekeeping". In the instances of these four scales, a review of CAS and CSQ

did not reveal equivalent items explicitly noted. In addition, Scale #11, "Overload" is represented by one item in the OCO and the CSQ, and is not found as a separate item under any dimension of the CAS, but Goldhaber & Rogers (1979) point out that the CAS format for certain dimensions [e.g., Receiving Information, Sending Information, etc.] involving current status and ideal status, naturally furnishes a measure of underload and overload when comparing current status to ideal status for any item. In this respect, the CAS differs from the OCQ and the CSQ.

[Table 3 - about here]

III - RESEARCH APPLICATIONS OF THE INSTRUMENTS

The original objectives in this area were to answer the following three questions: (1) What research projects have employed the individual instruments?; (2) What communication dimensions were investigated and what location in the theoretical framework was occupied by each communication dimension?; (3) Why did the researcher choose the particular instrument for use in the study?

As events worked out, we had an intermediate level of success in answering the above questions. In response to the first question, our investigation of research applications uncovered 28 research applications in the 8 year period covered. However, it has been practical to review and analyze only two research studies for each of the instruments -- i.e., six research studies in all. The 28 research studies, fully referenced in the appendix and classified as to applicable instrument, remain to be more fully analyzed in a further study. On the second question, for the six studies analyzed, we did determine the communication dimensions and the place of such dimensions in the theoretical framework

of the individual studies. Finally, as to why the researcher chose the particular instrument, while it would have been best if we could have contacted each of the researchers and requested an answer to the question, this was not considered feasible, and remains to be the subject of further research. Instead, we decided to relie on a process of deduction based on the determination of the dimensions studied by the researcher and the comparison of those dimensions to the scales provided in the three instruments under review in this chapter. Of course, we had no way of knowing whether the researcher actually considered each of the three instruments, although it is helpful to this line of reasoning to realize that all of the instruments had been fully or substantially developed by 1977, and the earliest year of the research studies reviewed was 1979. Therefore, it was entirely possible for all of the researchers to have considered each of the three instruments.

COMMUNICATION AUDIT SURVEY QUESTIONNAIRE (CAS): -
THE INTERNATIONAL COMMUNICATION ASSOCIATION [ICA]

In respect to the applications of the ICA Communication Audit Survey Questionnaire, we reviewed dissertations by Nelson (1981), and Henderson-Long (1980). Nelson investigated whether factors of organizational climate (management style, communication systems) were associated with success in the implementation of affirmative action programs. The subjects (administration, faculty, other) completed two instruments, the Likert Profile of Organizational Characteristics and the Communication Audit Questionnaire. Results indicated that organizational climate, defined in terms of management style and communication systems, were related to success with affirmative action implementation: and Nelson concluded that the organizational climate which seemed best to facilitate the implementation of affirmative action was characterized by a consultative management system, openness, timely information, high levels of interpersonal and

group communication, and reliance on formal versus informal sources of information. In this study, the Communication Audit Survey measured an intervening variable with management style as the independent variable and performance of affirmative action as the dependent variable. The particular communication dimensions of interest were sources, timeliness, and organizational relationships, all of which are found in the CAS and the CSQ, so that the Downs-Hazen CSQ could have fulfilled the same function as the CAS for the purpose of determining comunication climate. On the other hand, the Roberts & O'Reilly OCQ lacks a timeliness scale and would not have represented as good a fit as the other two instruments. The researcher and faculty counselor may have chosen the CAS due to the relatively large publicity given this instrument at professional conventions and in the literature. Furthermore, the CAS does supply more detailed information within any scale than is true of the CSQ, and this may have been attractive to the researcher.

Henderson-Long surveyed superior-subordinate perceptual incongruence in a large federal government agency, giving special attention to the race of the supervisor and indices of work performance. Two instruments, representing minor modifications of the Communication Audit Survey, were used on a sample comprised of Black and White supervisors and their immediate subordinates. Supervisors were asked to estimate their subordinates' responses to eight communication dimensions; and Subordinates were asked to indicate their perceptions of the same communication dimensions. Results indicated that there were specific dimensions of perceived communications that discriminated between supervisors and subordinates and between subordinates supervised by Whites and subordinates supervised by Blacks. In respect to these research interests, the Communication Audit Survey measured various dimensions of communication as a dependent variable reacting to organization level and racial independent variables. Results also

noted that, on some dimensions of communication, perceptual incongruence was found to significantly relate to specific indices of work-unit performance, and these relationships varied with the race of the subordinates' supervisors. Viewing the entire study as a single theoretical formulation, the role variable constitutes the independent variable, with perceived communication incongruence the intervening variable, race as the moderating variable, and work-unit performance as the dependent variable. In respect to the selection of an instrument that would provide communication perceptions on the part of supervisors and on the part of subordinates, while the CAS was employed, it appears that the CSO and the OCO would have been equally effective. However, the considerable detail provided by the CAS might have been an attraction over the other instruments as well as the publicity given the CAS in professional conventions and journals during the 1970's.

COMMUNICATION SATISFACTION QUESTIONNAIRE (CSQ): DOWNS AND HAZEN

In respect to applications of the Downs-Hazen instrument, we reviewed dissertations by Biggs (1982), and by Jones (1981). Biggs examined the relationship between the bureaucratic variables of centralization, formalization, and complexity, and teacher communication satisfaction. Communication satisfaction was the dependent variable measured by the Communication Satisfaction Questionnaire (CAS). Basically, it was a study of the influence of structure on communication dimensions. Teachers in 8 Missouri schools (middle-sized) were surveyed. Centralization and Formalization were measured by the "School Organization Inventory" [MacKay & Robinson] while complexity was determined through information gathered on an information sheet. Findings indicated that there was no significant relationship between the bureaucratic variables, by themselves or in combination, and communication satisfaction. Relative to the selection of the CSO to measure communication satisfaction, the title of the instrument suggests

strongly that it is intended to measure communication satisfaction, providing both for general job satisfaction as well as for many dimensions of communication satisfaction. Furthermore, the CSQ was half the length of the CAS, appeared easier to score and concentrated on communication satisfaction in most of the scales: while the OCQ was about the same length as the CSQ but did not give as much attention to communication satisfaction, providing only 1 item out of 35 directly on that subject.

Jones investigated the relationship between communication satisfaction and job satisfaction; and the relationships between communication satisfaction and selected demographic characteristics. Respondents completed the Downs and Hazen Questionnaire which included questions relative to communication satisfaction and job satisfaction. A significant relationship was found between job satisfaction and all of the communication components of the Downs-Hazen instrument, except for "communication with subordinates", which was completed only by supervisors. In the hypotheses testing the relationship between communication satisfaction and job satisfaction, the Downs & Hazen Questionnaire served to measure the independent variable, while at the same time furnishing data as to the dependent variable of job satisfaction. In the hypotheses testing the relationships between communication satisfaction and selected demographic characteristics, the CSQ measured a dependent variable. In respect to the decision as to which measurement instrument to employ for the study of communication satisfaction, the CSQ of Downs & Hazen was uniquely appropriate for this particular research study as the CSQ was a relatively short instrument, uniquely concentrating on the various dimensions of communication satisfaction, as well as furnishing 3 items on general job satisfaction. Neither the CAS or the OCQ could equal these qualifications of the CSQ for this investigation.

ORGANIZATIONAL COMMUNICATION QUESTIONNAIRE (OCQ): ROBERTS & O'REILLY

In respect to the applications of the Roberts & O'Reilly instrument, we reviewed dissertations by Anderson (1980) and Mier (1979). Anderson studied the relationships between job design and worker responses to their jobs (job satisfaction, absenteeism, performance) and the moderating effect of work environment (physical work environment, communication accuracy and communication openness) and individual attribute variables. The communication-related variables were measured via the Roberts & O'Reilly Organizational Communication instrument: and this instrument served as a test of hypotheses wherein the organizational communication dimension of communication accuracy and communication openness served as moderator variables. Whereas the OCQ, CAS, and CSQ instruments, all provide scales for communication openness (e.g., trust in superior, directionality-upward, directionality-lateral), only the OCQ provides a scale for communication accuracy. The existence of this scale in the OCQ together with the fact that the OCQ is the shortest of the three instruments may explain the selection of the OCQ by researcher Anderson.

Mier studied the effects of chairperson selection versus appointment on faculty perceptions of attitude-homophily and interpersonal-organizational communication. The researcher hypothesized that faculty perceptions would reveal more frequent and more effective communications as well as greater attitude similarity with department chairmen being elected versus department chairmen being administratively appointed -- i.e., that source-receiver similarity (homophily) increases the likelihood of communication attempts and promotes communication effectiveness. The measurement tools employed were the Organizational Communication Ouestionnaire and Homophily in Interpersonal Communication Questionnaire [McCrosky, Richmond & Daly]. In this study, the OCQ instrument served to measure the dependent variable of faculty frequency and effectiveness of interpersonal organizational communication. In respect to explaining why the researcher chose

the OCO, it is interesting to note that the Roberts & O'Reilly OCQ instrument contained 5 scales relative to faculty-chair organizational communication: (1) trust in superior, (2) directionality-upwards, (3) desire for interaction, (4) accuracy of information, and (5) gatekeeping; and that the CSQ and the CAS did not provide scales for (1) accuracy of information, and (2) gatekeeping. If the researcher did review the three instruments of CAS, CSO, and OCQ, the presence of accuracy and gatekeeping scales in the OCQ, plus its short length, and ease of scoring, may have been determining factors.

IV - THE INSTRUMENTS

The following detailed description of each of the three instruments includes five major segments:

1 - General Description, constituting broad background information;

2 - Structure and History of the Instrument Development, furnishing summary information as to scales, items, and response format, as well as instrument author comments relative to various drafts of the instrument:

3 - Reliability Assessment information;

4 - Validity Assessment information:

5 - An Abbreviated Version of the Instrument, including:
-response format and scoring
-dimensions (scales)
-number of items within each dimension
-illustrative questions relative to each dimension

THE COMMUNICATION AUDIT SURVEY OUESTIONNAIRE (CAS)
by The International Communication Association (1977)

GENERAL DESCRIPTION:

The Communication Audit Survey Questionnaire was developed as one part of a five instrument package representing a standardized system for examining communication in organizations. The other four instruments in the package developed by

members of The International Communication Association included (1) Interview, (2) Critical Incidents, (3) Communication Diary, and (4) Network Analysis. In the most recent versions of the CAS, the critical incident instrument has been merged into the Communication Audit Survey questionnaire (Goldhaber & Rogers, 1979, p. 33).

Goldhaber and Rogers (1979, p.8) note that the overall objective of the ICA Communication Audit System is to evaluate the organization's communication system, giving specific consideration to the following:

-information underload and overload,

-quality of information from various sources,

-extent of interpersonal trust and overall job satisfaction,

-operational communication networks, both formal and informal,

-potential bottlenecks and gatekeepers of information

-identifying commonly occurring positive and negative communication experiences,

-describing patterns of actual communication behaviors related to sources, channels, topics, length and quality of interactions, and

-providing general recommendations which call for changes or improvements in attitudes, behaviors, practices, and skills.

STRUCTURE AND HISTORY OF DEVELOPMENT:

In Goldhaber & Rogers (1979), the Communication Audit Questionnaire consists of 8 major dimensions organized as 13 subscales involving 122 items plus 12 demographic questions. The dimensions are as follows:

1- Receiving information: - current condition
2- Receiving information: - ideal condition

3- Sending information: - current condition
4- Sending information: - ideal condition

5- Follow-up on information sent: - current condition
6- Follow-up on information sent: - ideal condition

7- Information sources: - current condition

8- Information sources: - ideal condition

9- Timeliness of information received from key sources
10- Organizational Communication Relationships
11- Organizational Outcomes

12- Channels of Communication: - current condition
13- Channels of Communication: - ideal condition

Response format for the 122 items is a 5 point scale with 1 being "very little" and 5 being "very great": and response format for the demographic questions calls for multiple choice selection of answers.

Goldhaber & Rogers (1979, pp. 33-34) describe the development of the survey instrument as follows:

-The survey was intended to measure both attitudes ("how do you feel?) and perceptions about ("to what extent do you ...?") communication sources, messages, channels and receivers within the context of the major interfaces ----- individual to individual, individual to unit, individual to organization, unit to unit and organization to environment.

-Major topics to be surveyed included concepts about information accessibility, information adequacy, communication satisfaction and importance, communication content (clarity, accuracy, utility, appropriateness, timeliness), communication relationships, and communication outcomes.

-Between May and September 1974, three drafts of an extensive survey were completed, based upon the above framework and revised according to comments provided by audit team members. Draft 3, consisting of 184 items and 9 demographics was pilot-tested in 6 organizations (n=1,776).

-As a result of the pilot-testing, the survey was refined to 116 items and 10 demographics. Primary criteria used in deciding which survey items should be retained or deleted from Draft 4 were:

-reliability: - compared with other items in its section as to value toward the entire instrument.

-inter-item correlation: - number of other items within a section which correlated with it, measuring its internal consistency.

-face validity: - clarity, appropriateness, relevance, as determined by content experts, and importance of item, as determined by organizational members.

-correlation with outcomes: - as a measure of predictive validity, how well did the item correlate, across audits, with key organizational outcomes?

-factor analysis data: - did an item cluster with other items appearing to measure a single factor.

All criteria were used collectively to make decisions for each item; factor analysis data were only useful for the "relationships" section of the questionnaire where 3 clear factors were identified, accounting for about one-half of the variance.

Goldhaber (1976) explains that the major revision in the survey from Draft 3 to Draft 4, beside the cut-down in number of items from 193 to 126, was to change from a "satisfaction/importance" measurement paradigm to an "information adequacy" paradigm. In Draft 3, about one-half the items measured both the satisfaction felt and importance of information received on various topics, from various sources and through various channels. For example: "How satisfied are you with information received from your boss?" in Draft 3 was accompanied by the question "How important to you is receiving information from your boss?" Goldhaber notes that this type of question, in Draft 3, combines both attitudinal and perceptual responses, as well as providing inferential evidence about organizational needs -- i.e., a person very dissatisfied with information received from boss who perceives the information as "extremely important" represents a greater organizational need for change than a person of similar feelings as to information received from boss, but who perceives the situation as only "somewhat important" (Goldhaber, 1976, p. 30).

In Draft 4, this paradigm in Draft 3 was changed to a more direct measure of organizational needs, one which dealt only with perceptual data -- i.e., an information adequacy paradigm. For example, the above question as to information received from boss would be framed as follows: "How much information do you now receive from your boss?", and "How much information do you want to receive from your boss?" If there is little difference between the amount of information currently received and that desired, we may conclude that the situation is information adequate. However, if a person receives "very little" information and

desires a "very great" amount, we have an information underload situation, requiring more information; and if a person receives a "great" amount of information, and desires "very little", we have an information overload situation, requiring less information.

In the change from Draft 3 to Draft 4, in addition to shortening the survey and changing the measurement paradigm, Goldhaber reports that the demographics were switched from the front of the questionnaire to the rear, so as to reduce immediate threat to the respondent, additional demographics were added, measures of perceived organizational effectiveness were added, sections assessing information follow-up and the grapevine's flow were added, and major editorial changes were made to reduce the ambiguity of language. Finally, 18 items deleted from Draft 3 were placed in a "cafeteria" so that an organization desiring to customize its survey might add any of these items to the end of Draft 4.

Draft 4 of the CAS, containing 116 items and 10 demographics, was tested in 4 organizations (n=178) in early 1976 and resulted in minor changes. Between May 1976 and May 1977, Draft 5 was used in 6 organizations (n=1977) (Goldhaber & Rogers, 1979, p. 34). The final survey instrument contained 122 items and 12 demographics.

RELIABILITY ASSESSMENT:

In Goldhaber & Rogers (1979, p. 34), it was reported that Draft 5 of the survey, containing 188 items and 10 demographics, had an overall reliability [Nunnally, Equation 6.18, p. 193] of .838 for the 8 scales, with the reliability coefficients of individual scales ranging from .699 for Information Sources to .901 for Organizational Communication Relationships.

In addition to the inter-item reliability within a scale, Goldhaber & Rogers furnished average correlation of each scale with the total score, reporting, as of March 15, 1977, with an n=2301, that the Information Sources scales had

coefficients of .54 (current) and .58 (ideal); Receiving Information scales had coefficients of .64 (current) and .60 (ideal); Sending Information scales had coefficients of .77 (current) and .73 (ideal); and the Organizational Outcomes scale relative to satisfaction with job, pay, advancement, and organization climate, had a .669 correlation with total score.

In their psychometric study of the CAS, DeWine, James and Walence (1985) applied the CAS to 17 local and regional organizations (n=1580), comparing the Cronbach Alpha of these regional organizations to the Cronbach Alpha of the ICA Audit National Data Bank, as reported by Porter (1979). In almost every instance, the reliability statistics of the Regional Data Bank (i.e., the 17 local organizations) was higher than the ICA Audit National Data Bank, leading to the conclusion that centrally controlled data collection within a specific region appears to generate stronger reliability (DeWine, James & Walence, pp. 5-6). The ICA Audit National Data Bank alphas ranged from lows of .460 (Timeliness) and .565 (Follow-up Needed) to highs of .902 (Relationships) and .878 (Outcomes); whereas the Regional Data Bank alphas ranged from lows of .731 (Timeliness) and .792 (Sources:-current condition) to highs of .935 (Relationships) and .931 (Information Received:-Needed). Furthermore, the regional applications of the CAS yielded a total instrument alpha of .972 (DeWine, James & Walence, Table 2, p. 38).

VALIDITY ASSESSMENT:

Validity assessment measures included (1) predictive validity (how well did the item correlate, across audit, with key organizational outcomes); (2) face validity (clarity, appropriateness, relevance of items, as determined by content experts, and importance of items, as determined by organizational members); and (3) factor analysis data (did an item cluster with other items, appearing to measure a single factor?).

In respect to predictive validity, correlation coefficients were furnished between particular scales and "organizational outcomes" scale, with all coefficients noted as being "statistically significant." The range of these relationships were from .06 for Information Sources, Ideal to .70 for the Relationships scale (trusting, getting along, freedom to express self, openness of climate, influence). In general the current status of Receiving Information, Sending Information, Information Sources and Relationships were more predictive than the Ideal States for the same concepts. Furthermore, the predictive validity of the CAS is reinforced by the investigative work of Brooks, Callicoat and Siegerdt (1979) in their empirical study of 16 organizations which had completed ICA audits. They concluded that the pragmatic objectives of the multi-instrument ICA audit were being realized and offered several hypotheses in explanation. One of the several explanations argues for the direct value of the audit as a diagnostic technique -- i.e., "the needs-analysis" focus of the audit helps create a greater awareness of communication problems, processes and behaviors within organizations (p. 135). Inasmuch as the CAS is one of the major instruments of the ICA Audit, it appears fair to state that the CAS did fulfill the diagnostic and predictive function of identifying communication weaknesses, the correction of which would improve both communication and organizational effectiveness.

In addition to the factor analysis procedures for the selection of items, another form of construct validity was applied to test the discrimination ability of each of the scales. Percentages were computed to represent the number of items which significantly (alpha=.05) discriminate between high and low scorers (top 17% versus bottom 17% and do so with at least a difference of one standard deviation). In this area, Goldhaber & Rogers (1979, p. 34) report 100% discrimination ability for Receiving Information scales, and Sending Information scales: and 78% and 89% for Information Sources, Current, and Information Source, Ideal,

noting that this particular assessment could not be applied to the Relationships scale, due to its multiple-dimensioned nature.

DeWine, James and Walence (1985) performed a factor analysis on all 122 items in the CAS, employing the combined ICA National and the Ohio University Regional Data Banks (30 organizations and 5,000 subjects), varimax rotation and a 50-40 criteria (p. 6). Whereas the CAS instrument employs 13 subscales, only the following 8 factors emerged from this analysis: (1) Information Received:-Current: (2) Information Received:-Needed: (3) Supervisor Relationship: (4) Follow-up-Needed: (5) Sources:-Needed; (6) Top Management/Organizational Outcomes; (7) The Grapevine: and (8) Job Complaints. As a result of this less than complete support received from the 122 item factor analysis, DeWine, James and Walence performed additional factor analyses for each of the original CAS subscales, using the Regional Data Bank (n=1250) and developed a modified CAS titled "Survey of Organizational Communication (SOC)", eliminating many CAS items which did not load on any factor and were not central to scale development, including other items which were either absent or not emphasized in the original CAS (e.g., information usefulness, accuracy, and timeliness), and providing for several specific open-ended questions centering around the flow of job and organization information to the individual employee.

NORMS FOR THE COMMUNICATION AUDIT SURVEY:

Goldhaber & Rogers (1979) present norms for the CAS based on the data collected by the International Communication Association during its first 16 administrations of the instrument. Organization types represented in the CAS norms include a large hospital, a public utility, a school system, government agencies, manufacturing organizations and a senator's office (p. 2). For each of the items in CAS, except for demographics, the norm is presented in the form of the mean, along with the standard deviation. In addition, the frequencies of

responses (n=3700) is shown for each of the five choices ("very little" to "very great") on the survey [pp. 149-154].

For the purpose of illustrating the utility of the norms, Goldhaber & Rogers present an actual study of The Municipal Housing Authority of Buffalo, New York; and for each dimension of the instrument (e.g., Receiving Information from Others) compare findings to norms by presenting the sample mean, the norm mean, and the sample sigma (standard deviation). A final column in the comparison of sample findings to norms is labeled "Relationship to Normative Scales", in which a verbal description is furnished -- i.e., "above norms", "below norms", or "same as norms". The authors explain that a scale is designated "above norm" or "below norm" only when the difference between the norm and the sample is greater than (or less than) 1.00 times the sample sigma (p. 127).

The construction of communication norms was one of the major objectives of the audit research by the International Communication Association: and makes the CAS distinctive as an instrument for data collection. None of the other instruments reviewed in this paper attempt to achieve such a goal. However, Goldhaber & Rogers indicate the difficulty of providing useful norms when they say "caution is advised in any attempt to use the norms since the survey is now in its 6th draft and has undergone significant changes since these norms have been collected" (p. 149). Sincoff & Goyer [1977] commented earlier on this same point, noting "of the 18 organizations audited to date, given instrumentation variation and the inability to compare dissimilar organizations, development of a useful normative data base is at best very limited, and at worst naively presumptuous [p. 60].

This note to exercise caution in the use of CAS national norms is also voiced by DeWine, James & Walence (p. 5) who found that their Regional Data Bank norms (n=1580), based on CAS studies of 17 local and regional organizations in

the years 1979-1983, differed significantly (p/ .01) from ICA Audit National Norms in the case of 76 out of 122 items; and they recommended the development of centrally controlled regional data banks for more accurate normative comparisons.

THE CAS INSTRUMENT: - The following information as to the Communication Audit Survey represents abstracts from the actual instrument so as to present the significant elements in brief form. The actual instrument may be seen in Goldhaber & Rogers (1979). This abbreviated version of the instrument includes (1) Response format and scoring, including provision for open-ended responses relative to each dimension (scale), (2) Dimensions (scales) and demographics, (3) Number of items within each dimension, and (4) Illustrative items for each dimension (scale).

Response Format and Scoring

122 items scored on a 5 point scale with 1 being "very little" and 5 being "very great". Response format for the 12 demographic questions calls for multiple choice selection of answers. Extensive keypunch instructions and coding procedures for the processing of completed questionnaires can be found in Goldhaber & Rogers (1979), along with illustrations of the data analysis provided through special software programs.

The Communication Audit Survey Questionnaire provides for open-ended responses to be furnished by the respondent. After each of the dimensions (scales), there is provided a separate page titled "Communicative Experience Form" on which the respondent can supply an open-ended response. The respondent is given the following instructions:

> "While you were filling out the previous section, the questions may have brought to mind a recent work-related experience of yours in which communication was particularly ineffective or effective. Please give us a clearly printed summary of that experience including:
>
> A - To whom does this experience relate? -- Subordinate, Co-worker, Supervisor.
>
> B - Rate the quality of the experience: -- (1) Effective, (2) Ineffective.
>
> C - To what item number in previous section does this primarily relate?
>
> D - Describe the communicative experience."

Scales and Illustrative Items:

Dimensions (Scales)	Illustrative Items
Receiving Information From Others (26 items)	
-current condition:	In respect to how I am being judged, this is the amount of information I receive NOW.
-ideal condition:	In respect to how I am being judged, this is the amount of information I NEED to receive.
Sending Information to Others (14 items)	
-current condition:	In respect to reporting what I am doing in my job, this is the amount of information I send NOW.
-ideal condition:	In respect to reporting what I am doing in my job, this is the amount of information I NEED to send now.
Follow-up on Information Sent (10 items)	
-current condition:	In respect to information I send to my immediate supervisor, this is the amount of follow-up NOW.
-ideal condition:	In respect to information I send to my immediate supervisor, this is the amount of follow-up NEEDED.
Source of Information (18 items)	
-current condition:	In respect to information received from Department Meetings, this is the amount of information I receive NOW.
-ideal condition:	In respect to information received from Department Meetings, this is the amount of information I NEED to receive.
Timeliness of Information Received from Key Sources (6 items)	In respect to information received from your immediate supervisor, to what extent can you say the information is usually timely -- not too early, not too late?
Organizational Communication Relationships (19 items)	To what extent can you say "I trust my co-workers?"
	To what extent can you say "My immediate supervisor listens to me."

Scales and Illustrative Items: (Continued)

Dimensions (Scales)	Illustrative Items
Organizational Outcomes (13 items)	Indicate the extent to which you are satisfied with your job.
	Indicate the extent to which you are satisfied with the organization's concern for its members welfare.
Channels of Communication (16 items)	
-current condition:	In respect to Bulletin Boards, this is the amount of information I receive NOW.
-ideal condition:	In respect to Bulletin Boards, this is the amount of information I NEED to receive.
Demographics (12 questions)	What is your sex?
	How long have you worked in this organization?
	How much training to improve your communicative skills have you had?

THE COMMUNICATION SATISFACTION QUESTIONNAIRE (CSQ)
by Cal W. Downs and Michael D. Hazen (1977)

GENERAL DESCRIPTION:

The Communication Satisfaction Questionnaire was presented in 1977 when there was a growing interest in developing comprehensive procedures for auditing communication in organizations, giving consideration to the relationships of communication with outcome variables as (1) productivity, (2) satisfaction, and (3) labor-management relations. The work by Downs & Hazen was mainly designed to explore the relationships between communication and satisfaction, providing to a minor extent for the communication-productivity relationship.

A review of the literature by the authors Downs & Hazen concluded that the composite aspects of communication satisfaction were as follows:

1- Explanation of policies, in answer to employee questions.

2- Understanding what is expected of one in job performance.

3- Advance notice of changes, through official sources.

4- Freedom to make suggestions to superiors.

5- Adequacy of information on those company matters regarded by the receiver as relevant to him.

6- Extent to which important information is obtained from sources or media preferred by the receiver.

7- Freedom to make complaints, to "sound-off".

8- Accessibility or approachability of superiors.

9- Degree to which supervisor makes an effort to understand feelings and problems of subordinates.

10- Degree to which supervisors express appreciation of good performance by subordinates.

11- Degree to which higher officers are open and willing to initiate communication.

In light of the composite nature of communication satisfaction, the objectives of Downs & Hazen were to test the hypothesis that communication satisfaction is multidimensional rather than unidimensional, and to determine how the individual dimensions relate to global job satisfaction. Crino & White (1981, p. 832) indicate that the Downs & Hazen definition of communication satisfaction is an individual's satisfaction with various aspects of communication in his organization.

STRUCTURE AND HISTORY OF DEVELOPMENT:

The Communication Satisfaction Questionnaire (CSQ), resulting from an extensive development process, finally included 40 items and eight dimensions plus six supplementary questions relative to job satisfaction and productivity. Therefore, the CSQ has 46 items in all. No demographics are included.

The final dimensions (scales) included the following:

1- Organizational Perspective
2- Personal Feedback
3- Organizational Integration
4- Relation with Supervisor

5- Communication Climate
6- Horizontal Communication
7- Media Quality
8- Relation with Subordinates

The response format in the final version is a 7 point scale, with 1 being "very satisfied" and 7 being "very dissatisfied".

The development process included three stages. First, an original questionnaire of 88 items was developed, administered, and factor-analyzed. The subjects were selected from the army, hospitals, professional organizations, universities, government agencies, and a wide variety of businesses across the United States. Second, on the basis of the first factor analysis, a new questionnaire was constructed, administered to four different organizations, and factor analyzed again. This version of the instrument has eight factors, five items to a dimension, 3 questions as to job satisfaction, and 3 questions as to productivity, for a total of 46 questions. The results supported the findings of the first stage of instrument development in that the items tended to cluster along the same eight factors, and there was seen to be great stability in the way they clustered. In the third stage, the correlation of each factor to job satisfaction was explored to determine which communication dimensions interacted most with job satisfaction: and it was found that Personal Feedback, Relation with Supervisor, and Communication Climate ranked highest in correlations with job satisfaction. (Downs & Hazen [1977], p. 71).

RELIABILITY ASSESSMENT:

Two types of reliability assessment support the CSQ instrument. Downs & Hazen (1977) reported on test-retest reliability, and Crino & White (1981) furnish internal consistency reliability measurements.

Test-Retest Reliability:

To test reliability, the Communication Satisfaction Questionnaire was administered to 20 subjects. One week later it was readministered to the same subjects. The reliability coefficient between the two administrations was .94 (Downs & Hazen, 1977, p. 69).

Internal Consistency Reliability:

Crino & White's (1981) study of the Downs & Hazen instrument presented two estimates of internal consistency for each subscale:

1- The coefficients alpha: These were found to be quite high, ranging from a low of .75 for Horizontal Informal Communication to a high of .86 for Personal Feedback.

2- Average correlation among subscale items: These were also considered by Crino & White to be "quite high" ranging from .38 for Horizontal Informal Communication to .54 for Personal Feedback [p. 835].

VALIDITY ASSESSMENT:

Downs & Hazen applied both construct validity and discriminant validity tests to determine if the instrument would carry out its intended purpose.

Construct Validity:

The original questionnaire of 88 items was administered to many organizations and factor analyzed. Subsequently, the revised questionnaire of 46 items and 8 factors was administered to 4 additional organizations in order to compare the factor structures derived from each. Results indicated a great amount of stability among the factors. See Crino & White (1981) for a replication (n=137) of the Downs-Hazen study in which Crino & White (p. 835) conclude that there is support for an eight factor solution, but do note some reservations.

Discriminant Validity:

In the second stage of the instrument development, an item validity analysis was performed on all 88 items then in the instrument to determine whether they differentiated significantly between satisfied and dissatisfied workers. Subjects were divided into quartiles on the basis of their responses to the one

item dealing with overall job satisfaction. The first and fourth quartiles were taken to represent satisfied and dissatisfied workers and their responses on the other 87 items were compared. A chi-square statistic and a .05 level of significance were used to determine whether the responses of the "satisfied" and "dissatisfied" workers were significantly different.

The results of this item validity analysis revealed that 83 out of the 88 items discriminated significantly between "satisfied" and "dissatisfied" workers; and all items which loaded significantly (i.e., .50 or above) on the communication satisfaction dimensions discriminated significantly between "satisfied" and "dissatisfied" workers.

THE CSQ INSTRUMENT: - The following information as to the Communication Satisfaction Questionnaire represents abstracts from the actual instrument so as to present the significant elements in brief form. The actual instrument may be obtained from the instrument authors (see information source below). This abbreviated version of the instrument includes (1) Response format and scoring, including provisions for open-ended responses, (2) Dimensions (scales), (3) Number of items within each dimension, and (4) Illustrative Items.

Response Format and Scoring:

40 items are scored on an identical 7 point scale, with 1 being "very satisfied" and 7 being "very dissatisfied". 3 items on the subject of job satisfaction and 3 items on the subject of productivity are scored differently. In the job satisfaction set, there is one item on a 7 point scale with 1 being "very dissatisfied" and 7 being "very satisfied"; a second item is on a 3 point scale with 1 being "job satisfaction stayed same", and 3 being "job satisfaction has gone down"; and the third item calls for an open-ended response as to how communication associated with the job could be changed to improve job satisfaction. In the set of 3 items relative to "productivity on the job", there is one item on a 7 point scale with 1 being "very low job productivity" and 7 being "very high job productivity"; a second item on a 3 point scale with 1 being "productivity stayed the same", and 3 being "productivity has gone down"; and the third item

calls for an open-ended response as to how communication associated with the job could be changed to improve the respondent's job productivity.

The authors of the instrument provide a Scoring Summary Sheet for the eight dimensions (scales) which permits the respondent or the administrators to conveniently derive a total score for each dimension and to interpret that total score for a given dimension on a 7 point scale, with 5-9 being "very satisfied", and 32-35 being "very dissatisfied". The six items relative to job satisfaction and job productivity are not included in the Scoring Summary Sheet.

Scales and Illustrative Items:

Dimensions (Scales)	Illustrative Items
Organization Perspective (5 items)	Indicate how satisfied you are with information about company policies and goals.
Personal Feedback (5 items)	Indicate how satisfied you are with information about how you are being judged.
Organizational Integration (5 items)	Indicate how satisfied you are with information about departmental policies and goals.
Relations with Supervisor (5 items)	Indicate how satisfied you are with extent to which your supervisor trusts you.
Communication Climate (5 items)	Indicate how satisfied you are with extent to which conflicts are handled appropriately through proper communication channels.
Horizontal Communication (5 items)	Indicate how satisfied you are with extent to which horizontal communication with other employees is accurate and free-flowing.
Media Quality (5 items)	Indicate how satisfied you are with extent to which meetings are well organized.
Relations with Subordinates (5 items)	Indicate your satisfaction with extent to which subordinates are responsive to downward directive communication.
Job Satisfaction (3 items)	How satisfied are you with your job?
Job Productivity (3 items)	How would you rate your productivity in your job?

ORGANIZATIONAL COMMUNICATION QUESTIONNAIRE
by Karlene H. Roberts & Charles A. O'Reilly, III (1974)

GENERAL DESCRIPTION:

Writing in 1974, Roberts and O'Reilly indicated that there had been no systematic development of instrumentation to measure communication variables in organizations; and their research was intended to develop a standardized questionnaire that could be used to compare communication between organizations, while allowing respondents to summarize their own communication behavior over time (Roberts & O'Reilly, 1974, p. 321).

Roberts & O'Reilly noted that organizational theorists agree that "good communication" makes a difference, so that an understanding of what is "good communication" and its correlates should increase our knowledge of organizational behavior. Further, that there is a need to relate communication measures to performance criteria and to objective and behavioral criteria so as to aid in the development of organizational communication models. They believed that organizations can be differentiated on the basis of communication dimensions (e.g., openness) and that workgroups could also be contrasted similarly. On this basis, they place great value on an easily completed measure of organizational communication that could describe various facets of communication across a variety of organization, workgroups, and homogeneous groups of individuals (e.g., supervisors).

STRUCTURE AND HISTORY OF DEVELOPMENT:

Based on a literature review, Roberts & O'Reilly created 189 Likert-type items to assess respondent perceptions of the communication dimensions. Initially, the 189 items in the pool were administered to 70 graduate students, all of whom had prior work experience and based their responses on such experience. Items were retained that had high intercorrelations with other items

measuring the same facets and low intercorrelations with the rest of the item pool. A 60 item questionnaire resulted consisting of 51 communication and 9 non-communication items. This version was administered to 86 mental health workers, at all job levels in a large medical center. Their responses were subjected to a V-type cluster analysis to further reduce the number of questionnaire items; and the nine non-communication items were subjected first to a principal-components analysis and then a varimax rotation from which three separate factors emerged, Trust, Perceived Influence, and Mobility Aspirations. Based on these analyses, the total instrument was reduced to 35 items, consisting of 10 multi-item indexes and 6 single questions.

Seven samples, with a total number of more than 1200 respondents were used to develop a 35 item questionnaire measuring 16 dimensions of communication utilizing, for the most part, a 7 point scale. No demographics were included.

The final dimensions (scales) were as follows:

1- Trust
2- Influence
3- Mobility
4- Desire for Interaction
5- Directionality-upward
6- Directionality-downward
7- Directionality-lateral
8- Accuracy
9- Summarization
10- Gatekeeping
11- Overload
12- Satisfaction
13- Written Medium
14- Face to Face Medium
15- Telephone Medium
16- Other Medium

Noteworthy is the fact that the authors first included (1) communication purpose, (2) communication content, (3) importance, and (4) speed, but later discarded these dimensions due to the difficulty respondents had answering items relevant to these concepts. Also noteworthy is that items were developed to assess three

non-communication variables: (1) trust in superior, (2) perceived influence of the superior, and (3) respondent mobility aspirations. These variables were included on the basis that these elements had been repeatedly shown to influence individual communication in organizations (Roberts & O'Reilly, p. 321). The questionnaire therefore not only secures a report on the nature of communication as a process, but also as to certain variables which have been shown to influence communication.

The seven samples employed in the development process were as follows:

1- 24 graduate business students with previous job experience, and 42 managers from various firms.

2- 86 mental health workers.

3- 95 officers and men in a U.S. military unit.

4- 54 emergency room and outpatient hospital personnel.

5- 148 subjects from six comparable U.S. offices of the same organization.

6- 579 personnel in a second military organization.

7- 179 respondents at various job levels in six U.K. locations of a large financial institution.

Differences among the means and standard deviations across the seven samples (n=1218) revealed that within-group variance was less than between-group variance, thereby suggesting that it is feasible to discriminate among organizations using the 16 communication dimensions (Roberts & O'Reilly, p. 322).

RELIABILITY ASSESSMENT:

Two types of reliability assessments support the OCQ instrument: (1) Test-Retest Reliability, and (2) Cronbach's Coefficient Alpha.

Test-Retest Reliability:

The 35 item version of the instrument was administered twice to 24 graduate business students with previous job experience and to 42 managers. The admini-

strations were three weeks apart. In the student sample, 8 of the 16 dimensions had a test-retest correlation greater than .7; and for the manager sample, 8 of the 16 dimensions had a test-retest correlation greater than .7 with two other dimensions showing .69. Upward directionality with .84 for students and .87 for managers was the highest correlation, while low test-retest correlations were obtained for Summarization for both students (.35) and managers (.37), Face to Face Modality for managers (.41), and Telephone Modality for students (.39).

Coefficient Alpha Reliability:

Cronbach's Alpha is a measure of the internal consistency of the items measuring a dimension. For each of the seven samples noted above, the authors derived alpha for the ten dimensions having more than one item; arranged the results in terms of median, maximum, and minimum Cronbach alpha, concluding that the alphas derived from the seven samples for these ten dimensions appeared relatively consistent for all the dimensions, except for Gatekeeping (Roberts & O'Reilly, 1974, p. 322). Median Cronbach alpha for the seven samples ranged from a high of .84 for Directionality-Downward and .82 for Mobility to lows of .62 for Accuracy and .53 for Gatekeeping.

Muchinsky (1977) studied the coefficient alpha reliability of the Roberts & O'Reilly Questionnaire, in respect to the multi-item dimensions, and found results similar to that of Roberts & O'Reilly. Muchinsky employed independent samples involving a public utility home office (n=270) and branch office (n=404). Based on median reliability coefficients of the 7 samples of Roberts & O'Reilly, the results derived by Muchinsky were highly similar, identifying the scales Mobility and Directionality-Downward as having the two highest reliabilities, and the scales Accuracy and Gatekeeping as having the lowest reliabilities.

Yeager's (1978) examination of three OCQ scales [trust in superior, supervisory influence, and desire for promotion], he compared the Cronbach

alpha's reported in Robert's & O'Reilly's report, Muchinsky's report and his own replication [n = 2700], finding small differences. Yeager used Cronbach Alpha on the Trust scale (3 items), but Pearson correlations on the other two scales (2 items each) stating that "alpha is inappropriate for scales containing fewer than 3 items [p. 1322].

VALIDITY ASSESSMENT:

Roberts & O'Reilly applied the following three types of validity assessment to their instrument: (1) Face Validity, (2) Construct Validity, and (3) Convergent-Discriminant Validity.

Face Validity:

During the item development period, respondents indicated which questions were confusing or not differentiable in their minds. As a consequence, questions attempting to measure task versus social information, speed of transmission, and purpose of the communication, were eliminated (Roberts & O'Reilly, 1974, p. 324).

Construct Validity:

Roberts & O'Reilly (1974, p. 323) note that evidence for the construct validity of the 10 dimensions with multiple items is provided by the results of a cluster analysis, and the results increases confidence that even similar appearing facets, such as trust and influence, can be successfully differentiated from each other; and the intercorrelations among dimensions from a representative sample confirm the notion that communication dimensions are differentiable (p. 324). Results of the cluster analysis show that inter-item correlations among items within any index in the instrument are higher than are the correlations among items ~~of many~~ forming different indices. This provides some evidence for the construct validity of the ten dimensions with multiple items [Roberts & O'Reilly, 1973, p. 14].

On the subject of inter-scale correlations, Yeager's (1978) replication [n = 2700] found results similar to those reported by Roberts and O'Reilly. Yeager's study was limited to the three OCQ scales of trust in superior, supervisory influence, and desire for promotion.

In his assessment of the validity of the Roberts & O'Reilly OCQ, Muchinsky (1977) reports that his factor analyses of both home office and branches data of a public utility provides mixed support for the OCQ. Several of the factors derived were supportive of the Roberts & O'Reilly scales (Mobility, Directionality-Upward, Overload, and Summarization). However, the Muchinsky factor "Motivation to Interact with Superior" was found to include many items from both the communication and non-communication scales and was considered to be heterogeneous in conceptual content and non-confirmatory of Roberts and O'Reilly's findings. Likewise, Muchinsky found that his factor "Directionality-Downward/Lateral" was also a broad factor, composed of items from four different a priori scales, hence not supportive of results reported by Roberts & O'Reilly [p. 186]. Muchinsky notes that the difference in findings might be attributed to differences in analytic techniques as he had employed factor analysis, whereas Roberts and O'Reilly employed cluster analysis. Muchinsky further notes that the OCQ is more an instrument to study individual communication in organizations than a general organizational communication questionnaire, for the reason that it fails to include dimensions relative to communication between departments within an organization, and communication between branch offices and home offices of the same organizations [p. 187]. Finally, Muchinsky points out the need to include other variables in the questionnaire, giving special attention to the variables of (1) communication purpose, and (2) communication content. He notes that Roberts and O'Reilly are aware of these two variables due to their mentioning that items concerning these variables were discarded in the questionnaire

development process because of the difficulty subjects had in responding to them. Muchinsky's view is that these items may be vital to understanding organizational communication, and developing effective models linking communication to performance, so we must overcome the difficulties [p. 187]. However, despite his critical observations on the the validity of the OCQ, Muchinsky concludes that "with some additional variables and continued fine tuning the instrument should prove useful. . . . . [p. 188]."

Yeager (1978) examined three of the 16 scales in the OCQ [trust in superior, mobility aspirations, and influence of superior] finding high congruence between the factor structure of the replication (n = 2700) and that reported by Roberts and O'Reilly. Yeager concluded that these 3 scales will replicate in substantially different organizations; however there is a need for further development of these scales, noting that there are too few items in each scale and suggesting that all 3 scales would be strengthened if they each included several more items.

Convergent-Discriminant Validity:

Roberts & O'Reilly intercorrelated 12 of their dimensions [the three non-communication dimensions and nine of the communication dimensions excluding the four modality dimensions] with other similar and dissimilar measures in the study of 95 military respondents. The other measures were as follows:

1- Assessment of overall job satisfaction (Kunin, 1955).
2- Supervisor's considerate leadership style (Stogdill & Coons, 1957).
3- Organizational competence and flexibility (Campbell & Beaty, 1971).
4- Organizational Commitment (Porter & Smith, 1970).
5- Respondent's job tenure.
6- Respondent's formal education.

For the 95 military respondents, the intercorrelations of 12 OCQ dimensions with the 6 measures noted directly above resulted in the following convergences and discriminations:

1- The communication facets of influence, directionality downward and directionality-lateral, that generally change with military rank, were related to the comparative measures of education and tenure.

2- Trust in superior was found to be related to the respondent's overall job satisfaction, perceived considerate leadership style, perceived organizational competence and flexibility, and commitment to the organization, but not related to tenure and education.

3- The amount of information passed (gatekeeping) was significantly related to overall job satisfaction and to perception of superior as being considerate, but not to other variables.

4- Eleven of the twelve OCQ dimensions in this special analysis were found to be significantly related to the measure of overall job satisfaction.

5- The OCQ dimension of "Information Overload" was found to be negatively related to the measure of overall job satisfaction.

6- A positive relationship was found between communication satisfaction in the OCQ and considerate leadership as measured by Stogdill & Coons.

THE OCQ INSTRUMENT: - The following information as to the Organizational Communication Questionnaire represents abstracts from the actual instrument so as to present the significant elements in brief form. The actual instrument may be obtained from the instrument authors (see information source below). This abbreviated version of the instrument includes (1) General response format and scoring, (2) Dimensions (scales, indexes), (3) Number of items within each dimension, (4) Illustrative Items, and (5) Particular response format for each illustrative item.

General Response Format and Scoring:

The May 1973 version of the instrument, with 16 dimensions, 35 items and no demographics provided for 22 items on a 7 point scale and 13 items requiring the insertion of "percent of time involved", relating to the questions as to interaction with others, and modality employed. The 1974 article in the Journal of Applied Psychology (p. 323) still with 16 dimensions, 35 items and no demographics, noted that a revision of the questionnaire includes all items scored on 7 point scales, except for the three dimensions of Directionality-Upward, Directionality-Downward and Directionality-Lateral which use 10 point scales. However, in the 1974 version each of the ~~items~~ scales/dimensions has a specially labeled 7 point scale. For example, the item

"How free do you feel to discuss problems and difficulties with your immediate superior?" notes 1 as "completely free" and 7 as "very cautious"; and the item "how much do you feel that your immediate superior can do to further your career in this organization?" notes 1 as "much", and 7 as "little".

Scales and Illustrative Items:

Dimensions (Scales)	Illustrative Items and Response Format
1. Trust (3 items)	How free do you feel to discuss with your superior the problems and difficulties you have in your job without jeopardizing your position or having it "held against" you later? [completely free to very cautious]
2. Influence (2 items)	In general, how much do you feel that your immediate superior can do to further your career in this organization? [much to very little]
3. Mobility (2 items)	How important is it for you to progress upward in your present organization? [not important to very important]
4. Desire for interaction (3 items)	How desirable do you feel it is in your organization to be in contact frequently with others at the same job level? [very desirable to completely undesirable]
5. Directionality-upward (3 items)	While working, what percentage of the time do you spend in contact with superiors? [fill-in percentage]
6. Directionality-downward (3 items)	While working, what percentage of the time do you spend in contact with subordinates? [fill-in percentage]
7. Directionality-lateral (3 items)	While working, what percentage of the time do you spend in contact with others at the same job level? [fill-in percentage]
8. Accuracy (3 items)	When receiving information from the sources listed below (superior, subordinate, peers), how accurate would you estimate it usually is? [completely accurate to completely inaccurate]

Scales and Illustrative Items: (Continued)

Dimensions (Scales)		Illustrative Items and Response Format
9.	Summarization (3 items)	When transmitting information to your immediate superiors, how often do you summarize by emphasizing aspects that are important and minimizing those aspects that are unimportant? [always to never]
10.	Gatekeeping (3 items)	Of the total amount of information you receive at work, how much do you pass on to your immediate superior? [all to none]
11.	Overload (1 item)	Do you ever feel that you receive more information than you can efficiently use? [never to always]
12.	Satisfaction (1 item)	Put a check under the face that expresses how you feel about communication in general, including the amount of information you receive, contacts with your superiors and others, the accuracy of information available, etc. [respondent checks one of seven faces expressing range of happy feelings to unhappy feelings]
13-16	Modalities	Of the total time you engage in communications while on the job, about what percentage of the time do you use the following methods?
13.	Written (1 item)	Written (fill-in)%
14.	Face-to-face (1 item)	Face to face (fill-in)%
15.	Telephone (1 item)	Telephone (fill-in)%
16.	Other (1 item)	Other (fill-in)%

Appendix B provides details as to a 1979 revision of the Roberts & O'Reilly 1974 OCQ in which the original authors expand the number of dimensions (scales) from 16 to 20 and the number of items from 35 to 46.

SUMMARY, DISCUSSION, AND CONCLUSIONS

This paper has described and analyzed three of the most popular data collection instruments measuring organization-wide communication, the Communication Audit Survey (CAS), the Communication Satisfaction Questionnaire (CSQ), and the Organizational Communication Questionnaire (OCQ). The general concept of organization-wide communication, as employed by each of the authors, was presented, the dimensions of each instrument were compared for similarities and differences, and the nature of research applications of each instrument was discussed, noting the communication dimensions investigated, the place of the communication variable in the theoretical framework, and the reason the researcher may have had for choosing the particular instrument employed. In respect to each of the three instruments, the history of instrument development was reviewed, followed by information as to reliability and validity assessment, an abbreviated version of the instrument, and references to literature explaining, testing, or utilizing the instrument.

Conclusions in respect to the foregoing discussion may be drawn as to (1) concepts of organizational communication, (2) instrument dimensions (scales), (3) reliability and validity assessment, and (4) nature of research applications.

1 - CONCEPTS OF ORGANIZATION-WIDE COMMUNICATION:

Our analysis of the organizational communication dimensions included by the instrument authors discloses a common allegiance to the well-known and useful categories of communication climate, communication content, and communication flow.

In the area of communication climate, concerned with feelings and attitudes about communication and relationships in the organization, the CAS uses the dimensions of Organizational Communication Relationships (trust, listening, freedom to disagree, participation) and Satisfaction; the CSQ includes the dimensions of Relations With Supervisor (trust, openness, guidance), Communica-

tion Climate (handling of conflicts, identification with company) and Relations with Subordinates; and the OCQ includes the dimensions of Desire For Interaction, Satisfaction, and Trust In Superior (Fairness, equity, freedom to discuss problems).

In the area of communication content, concerned with the nature of the message as to purpose, content, quality and quantity, the CAS uses the dimensions of Receiving Information From Others (as to pay & benefits, job duties, how well I am doing job, etc), Sending Information to Others (as to kind of information sent), and as to Timeliness of Information (as it relates to various sources -- e.g., subordinates, supervisor, grapevine, etc.); the CSQ uses the dimensions of Organizational Integration (information as to progress in job, employee benefits, progress of the department and the company), and Organizational Perspective (information as to company policies, organization success or failure, company-union developments, etc.) and Media Quality [interest in company publications, caliber of group meetings]; and the OCQ includes the dimensions of Accuracy of Information (as received from superiors, subordinates, peers), Summarization (how often information is rephrased so as to separate the important and unimportant elements), Gatekeeping (propensity to withhold information), and Overload (the receipt of more information than can be used).

In the area of communication flow, concerned with direction, frequency, medium and channels of information, the CAS includes the dimensions of Follow-Up On Information Sent, Sources of Information, and Channels of Communication; the CSQ uses the dimensions of Horizontal Communication (including the Grapevine and informal communication), and Personal Feedback (how I am being judged, how problems are being handled, recognition of efforts, etc.); and the OCQ includes the dimensions of Directionality-Upward, Downward, and Lateral, as well as Written Medium, Face to Face Medium, Telephone Medium, and Other Media.

This analysis of communication climate, content and flow elements within each of the three instruments indicates large areas of similarity. However, there are some significant differences among the instruments which can be seen more clearly in the dimensionality comparison presented in the body of the paper. Conclusions derived from the dimensionality comparison follow.

2 - INSTRUMENT DIMENSIONS (SCALES):

As noted in Table 1 above, the CAS scales generally provide more items for each dimension than is found in the CSQ and the OCQ; and 3 of the CAS dimensions markedly differ from either one or both of the other two instruments. Follow-Up On Information has no counter-part in the CSQ or the OCQ; Timeliness Of Information is handled by 6 items in the CAS, and by one item in the CSQ, and is not represented in the OCQ; and Satisfaction With Organizational Outcomes represented by 13 items in the CAS in respect to pay, job, advancement, efficiency, goals, and product, is found in much less detail in both the CSQ and the OCQ. One of the most outstanding differences between the three instruments relates to provisions for open-ended responses. The CAS requests open-ended responses after the completion of each scale (dimension) providing a recording form called "Communicative Experience Form"; and in contrast, the OCQ does not provide for any open-ended responses, while the CSQ requests open-ended responses in respect to two items only, asking how communication associated with the job could be changed to improve the level of job satisfaction, and the level of productivity. Finally, the CAS differs from the other two instruments in the respect that it develops a "needs index" in the case of five dimensions. The difference between the "current state" of an item and the "ideal state" of that same item is considered an index of "needs". This may be positive when ideal is greater than the current state, and thereby indicative of "underload", or it may be negative when ideal is less than the current state, and thereby indicative of "overload".

As noted in Table 2 above, the CSQ scales (dimensions) differ from the other instruments in five respects: (1) The 3 item scale for General Job Satisfaction has no exact counterpart in the other two instruments. The items in this scale call for the present state of job satisfaction, the trend of recent changes in job satisfaction, and an open-ended response as to suggested changes in job communication to improve job satisfaction; (2) The 3 item scale for Productivity does not appear in either the CAS or the OCQ; (3) The scale for General Organization Perspective (information as to company policies, organization success or failure, company-union developments, etc.) is not found in the OCQ, but does appear fully in the CAS; (4) The five item scale for Organizational Integration (information as to progress in job, employee benefits, progress of the department and the company, etc.) appears most completely in the CAS but is treated briefly by one item in the OCQ; and (5) The five item scale for Communication Climate is represented by six items in the CAS and by one item in the OCQ.

As noted in Table 3 above, five of the OCQ scales differ from the other instruments. Four of the scales (Influence Of Superior, Accuracy Of Information, Summarization Frequency, and Gatekeeping) do not appear in either the CAS or the CSQ; and the one item scale for Overload is represented by one item in the CSQ but is not found as a separate item under any dimension of the CAS. However, it should be noted that Goldhaber & Rogers (1979) point out that the CAS format, where five dimensions call for current status and ideal status of items, naturally furnishes a measure of underload and overload. In this respect, the concept of overload, as implemented in the CAS, appears to provide a more detailed and balanced view of the communication overload phenomenon than is found in either the CSQ or the OCQ.

3 - RELIABILITY AND VALIDITY ASSESSMENT:

The three instruments have been discussed in terms of reliability, validity, and psychometric replications. Reliability measures involved (1) internal consistency and (2) test-retest. The coefficient alphas for the CAS and CSQ relative to the internal consistency of individual dimensions were in the range of .7 to .9, while the OCQ was in the slightly lower range of .53 to .84. Correlation coefficients for the test-retest assessment were not available from each of the instruments on a uniform basis, with the CSQ literature reporting .94 for the overall instrument, the OCQ literature reporting .35 to .87 for individual scales, and the CAS literature not disclosing any information as to test-retest assessment.

Validity assessments included (1) face validity tests for each instrument; (2) construct validity procedures based on factor analysis or cluster analysis for each instrument; and (3) convergent and discriminant validity assessments with the CAS reporting .78 to 1.0 for individual dimensions, the CSQ reporting .94 for the overall instrument, and the OCQ authors reporting high levels of convergent and discriminant validity applicable to selected scales, but not furnishing any summary correlation coefficients relative to the entire instrument.

A search of the literature disclosed psychometric replications for each of the three instruments. DeWine, James & Walence (1985) applied the CAS to workers, supervisors and managers in 17 organizations local to Ohio University (Athens, Ohio) in the period 1978-1983 (n=1580). Findings as to reliability, based on the local regional data, supported and exceeded the coefficient alphas derived from the ICA National Data Bank, ranging from a low of .731 (Timeliness) to a high of .935 (Relationships) with a total instrument alpha of .972; but mixed support was found for the CAS dimensionality with only 8 factors emerging from the factor analysis (vs. 13 subscales in the CAS) including several factors not treated as subscales in the CAS. This finding as to the mixed quality of CAS

construct validity bears out the fears of Sincoff & Goyer (1977) that "whereas content validity is apparent, the criterion and construct validities of the (ICA) instruments are not reported (p. 61)." Since the 1977 writing of Sincoff & Goyer, the work of Brooks, Callicoat and Siegerdt (1979) has supported the CAS in respect to predictive criterion-related validity, and the work of DeWine, James, & Walence (1985) described above has provided the first critical test of the CAS in respect to factorially-based construct validity.

Crino and White (1981) applied the CSQ to first-line supervisors from five U.S. textile mills, and found the coefficients alpha to be very satisfactory, and the 8 factor dimensionality to be appropriate; but noted that the average correlation among subscales was "quite high", ranging from .38 Horizontal Informal Communication to .54 for Personal Feedback.

Muchinsky (1977) studied the OCQ, employing samples from a public utility home office and branch offices, finding a high level of support for the Roberts & O'Reilly coefficient alpha reliability, but noting mixed support for some of the OCQ dimensionality. In addition, Muchinsky claimed that the OCQ is more an instrument to study individual communication in organizations than a general organizational communication questionnaire due to the absence of dimensions relative to inter-group and inter-organizational communication; and further noted that there is need to include the variables of communication purpose and communication content to the OCQ questionnaire.

4 - NATURE OF RESEARCH APPLICATIONS:

In respect to applications of the CAS, we reviewed the use of that instrument in dissertations by Nelson (1981), and Henderson-Long (1980). In Nelson's study of organization climate and performance, it appeared that the CSQ could have fulfilled the same function as the CAS for the purpose of measuring communication climate, but the OCQ lacked a communication timeliness scale and would not

have represented as good a fit as the other two instruments. In the Henderson-Long study of superior-subordinate perceptual incongruence in a government agency, it was concluded that the CSQ and the OCQ would have been equally effective, and might have entailed less work in administration and processing.

Research applications of the CSQ included the two doctoral dissertations by Biggs (1982) and Jones (1981). Biggs studied the relationship between bureaucratic variables and teacher communication satisfaction, and it was concluded that the CSQ was ideal for measuring the dependent variable of teacher communication satisfaction, being both a relatively short instrument and one designed primarily for the measurement of communication satisfaction components. Alternatively, the CAS provided 13 items for the satisfaction dimension but the entire instrument was more than twice as long as the CSQ; and the OCQ, although the shortest of the 3 instruments, did not give much attention to communication satisfaction components, being limited to one item in one scale. Likewise in the Jones dissertation research, investigating the relationship between communication satisfaction and job satisfaction, among other relationships, the choice of the Downs & Hazen CSQ was uniquely appropriate as the CSQ is a relatively short instrument concentrating on the various dimensions of communication satisfaction, and also furnishing 3 items as to general job satisfaction. Neither the CAS or the OCQ could equal these qualifications of the CSQ for this particular investigation.

The dissertations by Anderson (1980) and Mier (1979) provided applications of the Roberts & O'Reilly OCQ instrument. Anderson studied the relationships between job design and worker satisfaction and performance, giving attention to the moderating effect of work environment including communication accuracy and communication openness. The communication variables were measured by the OCQ, apparently for the reason that the OCQ covered both communication openness (trust

in superior, directionality-upward, directionality-lateral) and communication accuracy, whereas the CAS and the CSQ did not cover communication accuracy. Mier used the OCQ in her dissertation study of the effects of chairperson appointment systems (faculty selection vs. administrative appointment) on faculty perceptions of attitude-homophily and interpersonal-organizational communication. Five dimensions of communication in the OCQ were related to faculty-chair organizational communication, including information accuracy, and gatekeeping, which dimensions were not included in the CAS or the CSQ. Therefore, in both the Anderson and the Mier applications, the OCQ utilization was justified on the basis of unique content which served the needs of the researchers to a greater extent than the CAS or the CSQ. In addition, the OCQ was the shortest of the 3 instruments and this was an important factor in administration, scoring, and data analysis.

METHODOLOGY FOR INSTRUMENT SELECTION:

In addition to furnishing a comparison of three recognized instruments measuring organization-wide communication, the broader objective of this paper was to suggest a methodology for instrument evaluation prior to instrument selection. Our work on the 3 instruments measuring organization-wide communication, and the foregoing discussion of the applications of those instruments in dissertation studies provide a basis for the formulation of questions that might be posed and answered when the researcher is concerned with instrument finding, evaluation, and selection. The following list of questions is considered to be a beginning step in the development of a structured approach to measurement instrument selection:

1- Is the theoretical framework of the research project clearly set forth in writing? Are all variables indicated thereon?

2- For a particular variable to be measured, do we know all the recognized instruments available? Has an attempt been made to locate the names of such instruments?

3- For each of the recognized instruments measuring the particular variable, have we taken steps to acquire a copy of the actual instrument and the administrative manual or the basic literature explaining the instrument?

4- For each of the recognized instruments, have we identified the dimensions within each instrument?

5- For the most likely acceptable instruments, have we grouped the instrument items relative to each dimension so as to obtain a better grasp of instrument contents?

6- For the most likely acceptable instruments, have we compared dimensions and item contents of each dimension to the other instruments?

7- Which of the instruments have unique content?

8- Based on items and dimensions, which of the instruments would be acceptable to measure the variable in the theoretical framework of the research design?

9- To what extent must the instrument be modified to suit the particular purposes of the current research project?

10- Have we located and reviewed research studies employing this research instrument, so as to note special comments and problems?

11- Is the data relative to reliability and validity acceptable, as obtained from the author article or manual, and/or the psychometric assessment literature?

12- For the instruments that would be acceptable, have we reviewed articles on psychometric assessment?

13- From the viewpoint of administering the instrument, and processing the data, what are the pros and cons of those instruments that do adequately measure the particular variable?

Where there exist several recognized measurement instruments for one variable, the above list of analytical steps provides an evaluation process which should lead to selection of the optimum instrument for the immediate research. Where there is but one recognized instrument, the decision to utilize or not rests upon a similar evaluation process. Where there is no recognized instrument, or the recognized instruments that exist are not adequate to the purpose, the alternative is to develop an original instrument. It is interesting to note

that, in doctoral dissertation research studies, the development of original instruments appears to be as frequent as the use of recognized instruments. However, this paper has been concerned only with recognized instruments. The development of original instruments and recommendations relative to the reporting thereon is outside our present scope but is an area of measurement methodology that deserves much attention.

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APPENDIX A
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APPENDIX B
THE ORGANIZATIONAL COMMUNICATION QUESTIONNAIRE: 46 ITEM VERSION

In 1979 Roberts and O'Reilly developed a 46 item version of the Organizational Communication Questionnaire [OCQ], adding 4 dimensions and 11 items. The dimensions added consisted of (1) Underload [preference for more information], (2) Redundancy [degree of repetition in the receipt of information], (3) Information Change [degree to which information is deliberately changed or withheld], and (4) Expansion [degree to which information is perceived to be expanded in transmission]. Table 4 provides a comparison of the dimensions and number of items for the 1974 and 1979 versions of the OCQ.

Roberts and O'Reilly indicate that they may be contacted for information concerning the reliability and validity of items or item sets assessing each of the communication dimensions.[7] This present review has not found any psychometric studies of the 1979 OCQ version. Both Muchinsky (1977) and Yeager (1978), discussed in the main text of this paper were psychometric studies of the 1974 OCQ. Space limitations do not permit further discussion of the 1979 OCQ. This will be more practical after research applications of the 1979 OCQ appear in published studies; and after a psychometric study is published.

It is interesting to note that the 1979 version of the OCQ includes a general question, not counted as one of the 46 items, as to whether respondents have subordinates, (Yes___,No___); and that the scaling is a 7 point scale for all questions except for 12 items which are fill-in of percentage of time devoted to activity. Apparently, the revised version mentioned in the 1974 article (Roberts & O'Reilly,p.323) involving both 7 point scales and 10 point scales have been superseded.

TABLE 1

The Communication Audit Survey [CAS]
Compared to the CSQ and the OCQ

CAS Dimensions			Corresponding Items in CSQ and OCQ	
	Title	Items	CSQ	OCQ
1	Receiving Information	26	5	7
2	Sending Information	14	2	12
3	Follow-up on Information	10	-	-
4	Sources of Information	18	3	3
5	Timeliness of Information	6	1	-
6	Organizational Communication Relationships	19	12	6
7	Satisfaction with Organizational Outcomes	13	3	1
8	Use of Channels of Communication	16	3	4
1-8	All Dimensions	122	29	33
	Items related to more than one dimension of the CAS		3	6
	Net items related to CAS		26	27
	Total Items in Instrument	122	46	35

TABLE 2

The Communication Satisfaction Questionnaire [CSQ]
Compared to the CAS and the OCQ

CSQ Dimensions			Corresponding Items in CAS and OCQ	
	Title	Items	CAS	OCQ
1	General Job Satisfaction	3	13	1
2	Productivity	3	-	-
3	General Organization Perspective	5	6	-
4	Personal Feedback	5	12	3
5	Organizational Integration	5	8	1
6	Relation with Supervisor	5	23	10
7	Communication Climate	5	6	1
8	Horizontal Communication	5	3	7
9	Media Quality	5	16	4
10	Relation with Subordinates	5	5	8
1-10	All Dimensions	46	92	35
	Items related to more than one dimension of the CSQ		1	6
	Net Items related to CSQ		91	29
	Total Items in Instrument	46	122	35

TABLE 3

The Organizational Communication Questionnaire [OCQ]
Compared to the CAS and the CSQ

OCQ Dimensions			Corresponding Items in CAS and CSQ	
	Title	Items	CAS	CSQ
1	Trust in Superior	3	5	5
2	Influence of Superior	3	-	-
3	Mobility Aspirations	2	2	2
4	Desire for Interaction	3	40	15
5	Directionality-Upwards	3	2	3
6	Directionality-Downwards	3	2	4
7	Directionality-Lateral	3	4	2
8	Accuracy of Information	3	-	-
9	Summarization Frequency	3	-	-
10	Gatekeeping	3	-	-
11	Overload	1	-	1
12	Satisfaction	1	13	3
13-16	Modalities	4	16	3
1-16	All Dimensions	35	84	38
	Items related to more than one dimension of the OCQ		2	15
	Net Items related to OCQ		82	23
	Total Items in Instrument	35	122	46

TABLE 4

The Organizational Communication Questionnaire [OCQ]:
Comparison of 1974 and 1979 Versions

	Dimensions	Number of Items 1974 OCQ	1979 OCQ [1]
1	Trust in Superiors	3	3
2	Influence of Superior	3	2
3	Mobility Aspirations	2	2
4	Desire for Interaction	3	3
5	Directionality-Upward	3	3
6	Directionality-Downward	3	3
7	Directionality-Lateral	3	3
8	Accuracy of Information Received	3	3
9	Summarization	3	3
10	Gatekeeping	3	6
11	Modality - Written	1	1
12	Modality - Face to Face	1	1
13	Modality - Telephone	1	1
14	Modality - Other	1	-
15	Overload	1	1
16	Satisfaction	1	1
17	Underload	-	3
18	Redundancy	-	1
19	Information Change	-	3
20	Expansion	-	3
	Totals	35	46

Note [1]: Source of information for OCQ 1979 is a formal unpublished memorandum prepared by Roberts and O'Reilly titled "Assessing Communication in Organizations" representing supplementary notes to Roberts and O'Reilly, "Measuring Organizational Communication," Journal of Applied Psychology, 1974, Vol. 59, 321-326. The memo is undated but appears to have been prepared in 1979.